

means for opening, by the client interceptor, a connection to the server interceptor using the first protocol following intercepting the second-protocol data communication request..

19. (Previously presented) The system of claim 18, further comprising:

means for receiving, by the client interceptor, an identification of the server application;

and

means for forwarding the identification to an address-resolution server for first-protocol address resolution.

20. (Previously presented) The system of claim 11, wherein the client application and the client interceptor reside on a same computing device.

REMARKS

The Examiner rejected claims 1, 5-8, 10-11, 15-18, and 20 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pepe et al. (hereinafter Pepe), US 5,673,322, in view of

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Gauvin et al. (hereinafter Gauvin), US 5,790,800.

The Examiner rejected claim 2 and 12 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pepe and Gauvin as applied to claims 1 and 11, and further in view of Wils et al. (hereinafter Wils), US 6,570,881.

The Examiner rejected claims 3 and 13 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pepe and Gauvin as applied to claim 1 and 11, and further in view of Backstrom et al. (hereinafter Backstrom), US 5,903,851.

The Examiner rejected claims 4 and 14 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pepe and Gauvin as applied to claims 1 and 11, and further in view of van Landegem et al. (hereinafter van Landegem), US 5,265,091.

The Examiner rejected claims 9 and 19 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pepe and Gauvin, and further in view of O'Connell et al. (hereinafter O'Connell), US 6,661,787.

Applicants respectfully traverse the §103(a) rejections with the following arguments.

35 U.S.C. §103(a)Claims 1, 5-8, 10-11 15-18, and 20

The Examiner rejected claims 1, 5-8, 10-11, 15-18, and 20 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pepe et al. (hereinafter Pepe), US 5,673,322, in view of Gauvin et al. (hereinafter Gauvin), US 5,790,800.

Applicants respectfully contend that claims 1 and 11 are not unpatentable over Pepe in view of Gauvin, because Pepe in view of Gauvin does not teach or suggest each and every feature of claims 1 and 11. For example, Pepe in view of Gauvin does not teach or suggest the feature: "compensating a disadvantageous characteristic of the first protocol, said compensating comprising ascertaining that a condition exists and eliminating the condition in response to said ascertaining, said condition being a connection condition or a transmission capacity condition".

The Examiner argues that Pepe teaches: "[c]ompensating a disadvantageous characteristic of the first protocol (col.9, lines 267, col. 10, lines 1-6), said compensating comprising ascertaining that a condition exists and eliminating the condition in response to said ascertaining, said condition being a connection condition or a transmission capacity condition (col.9, lines 2-67, col. 10, lines 1-6; appropriate response to failures)".

In response Applicants contend that Pepe's teaching that "the transaction system must respond appropriately" is not a teaching of "eliminating the condition", since there are appropriate responses other than "eliminating the condition". For example, eliminating the condition may be too expensive and an appropriate cost-effective response might be to mitigate the condition such that the mitigated condition is acceptable. As another example, the appropriate response may be to filter out events that cause the failure, leaving the condition

unchanged instead of mitigating or eliminating the condition.

The point is that Pepe is totally silent as to what an appropriate response might be, and Pope most certainly does not teach or suggest that the appropriate response is to eliminate the condition. Even in the example of provided in Pepe (col. 9, line 66 - col. 10, line 6), Pope does not provide even the slightest hint as to what an appropriate response to the condition might be.

Based on the preceding arguments, Applicants respectfully maintain that claim 1 is not unpatentable over Pepe in view of Gauvin, and that claims 1 and 11 are in condition for allowance. Since claims 5-8 and 10 depend from claim 1, Applicants contend that claims 5-8 and 10 are likewise in condition for allowance. Since claims 15-18 and 20 depend from claim 11, Applicants contend that claims 15-18 and 20 are likewise in condition for allowance.

Claims 2 and 12

The Examiner rejected claim 2 and 12 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pepe and Gauvin as applied to claims 1 and 11, and further in view of Wils et al., US 6,570,881.

Since claims 2 and 12 respectively depend from claims 1 and 11, which Applicants have argued *supra* to not be unpatentable over Pepe in view of Gauvin under 35 U.S.C. §103(a), Applicants maintain that claims 2 and 12 are likewise not unpatentable over Pepe in view of Gauvin and further in view of Wils under 35 U.S.C. §103(a).

In addition, Pepe in view of Gauvin and further in view of Wils does not teach or suggest the following feature of claims 2 and 12: "wherein the ascertaining comprises determining loss of a connection, and wherein the eliminating comprises re-establishing the connection."

The Examiner argues: "As per claims 2 and 12, Pepe and Gauvin taught the invention

substantially as claimed in claims 1 and 11. Pepe further taught to *respond* appropriately to failures in transmission paths (col.9, lines 66-67, col. 10, lines 1-6). Pepe and Gauvin did not specifically teach wherein the ascertaining comprises determining loss of a connection, and wherein the eliminating comprises re-establishing the connection. Wils taught a network status determining method that detects loss of connection and re-establish of the connection (col.6, lines 36-46, col.7, lines 56-67, col.8, lines 1-4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Pepe, Gauvin and Wils because Wils' teaching of determining connection loss enables Pepe and Gauvin's method to monitor more specifically and compensate more detail on the protocol, both advantageous or disadvantageous, and re-establish the loss connections (col.6, lines 36-46, col.7, lines 56-67, col.8, lines 1-4)."

In response, Applicants respectfully contend that Wils does not teach or suggest the preceding feature of claims 2 and 12. In particular, Wils does not teach or suggest "re-establishing the connection". Wils teaches that if loss of connectivity to an edge device occurs, then the response is to remove a switch to a truck cluster. Wils does not teach or suggest a response of re-establishing connectivity with the edge device that has lost connectivity, as is required by claims 2 and 12. See Wils, col. 7, lines 21-42; col. 8, lines 43-52.

Accordingly, Applicants respectfully contend that the Examiner has failed to establish a *prima facie* case of obviousness in relation to claims 2 and 12.

Claims 3 and 13

The Examiner rejected claim 3 and 13 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pepe and Gauvin as applied to claims 1 and 11, and further in view of Backstrom et al., US 6,570,881.

Since claims 3 and 13 respectively depend from claims 1 and 11, which Applicants have

argued *supra* to not be unpatentable over Pepe in view of Gauvin under 35 U.S.C. §103(a). Applicants maintain that claims 3 and 13 are likewise not unpatentable over Pepe in view of Gauvin and further in view of Backstrom under 35 U.S.C. §103(a).

In addition, Pepe in view of Gauvin and further in view of Backstrom does not teach or suggest the following feature of claims 3 and 13: "wherein the ascertaining comprises detecting that a connection is idle, and wherein the eliminating comprises dropping the connection and re-establishing the connection when a new communication request is intercepted."

The Examiner argues: "As per claims 3 and 13, Pepe and Gauvin taught the invention substantially as claimed in claim 1. Gauvin further taught to establish communication when request is intercepted (col.2, lines 38-42, col.12, lines 57-63). Pepe and Gauvin did not specifically teach wherein the act of compensating further comprises the acts of detecting that a connection is idle, dropping the connection, and reestablishing the connection. Backstrom taught to detect idle condition, drop connection and to reestablish connection (abstract, col.3, lines 65-67, col.4, line 1, lines 32-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Pepe, Gauvin and Backstrom because Backstrom's teaching of determining idle period enables Pepe and Gauvin's method to monitor more specifically and compensate more detail on the protocol, both advantageous or disadvantageous (abstract, col.3, lines 65-67, col.4, line 1, lines 32-39)."

In response, Applicants respectfully contend that Backstrom does not teach or suggest the preceding feature of claims 3 and 13. In particular, Backstrom does not teach or suggest "dropping the connection ". Backstrom, abstract recites: "Upon detection of the idle condition, identifying information for the call circuit connection is stored, and a first portion of the call circuit connection is disconnected while maintaining a second portion of the connection"

(emphasis added). Since the second portion of the connection is maintained in response to the idle condition in the call circuit, the connection to the call circuit is not dropped.

For further clarification with reference to FIGS. 1-2 of Backstrom, Backstrom, col. 46, lines 50 recites: "After the initial call circuit connection has been established and any requested data downloaded to the data terminal equipment 10 from the application host 65, the interworking unit 40 monitors for a period of inactivity over the call circuit connection ...". Backstrom, col. 3, lines 22 -24 states that "the radio air interface 20 and connections 50, 45, and 35, compris[es] the call circuit connection". Backstrom, further states in col. 3, line 67 - col. 4, line 6: "Thus, the air interface connection 20 between the mobile station 15 and base station 25 is discontinued. The connection 45 is maintained between the MSC 30 and (IWU) 40. The connection between the IWU 40 through the MSC 30 to the PSTN/ISDN network 55 is maintained as is the PSTN/ISDN network connection to modem 60 and application host 65. "

Accordingly, Applicants maintain that Backstrom does not teach "dropping the connection", because the portion 53, 45, 40 of the call circuit connection is not dropped in response to detection of an idle condition in the call circuit connection.

Accordingly, Applicants respectfully contend that the Examiner has failed to establish a *prima facie* case of obviousness in relation to claims 3 and 13.

Claims 4 and 14

The Examiner rejected claims 4 and 14 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pepe and Gauvin to claims 1 and 11, and further in view of van Landegem et al., US 5,265,091.

Since claims 4 and 14 respectively depend from claims 1 and 11, which Applicants have

argued *supra* to not be unpatentable over Pepe in view of Gauvin under 35 U.S.C. §103(a), Applicants maintain that claims 4 and 14 are likewise not unpatentable over Pepe in view of Gauvin and further in view of Landegem under 35 U.S.C. §103(a).

In addition, Pepe in view of Gauvin and further in view of Landegem does not teach or suggest the feature: "wherein the ascertaining comprises determining that transmission capacity is insufficient to process the data communication request **within a predetermined interval of time**, and wherein the eliminating comprises establishing a parallel connection to increase transmission capacity" (emphasis added).

The Examiner argues: "As per claims 4 and 14, Pepe and Gauvin taught the invention substantially as claimed in claims 1 and 11. Pepe further taught wherein the act of compensating further comprises the acts of determining that transmission capacity is insufficient process the data communication request (col.9, lines 26-32). Pepe and Gauvin did not specifically teach wherein the act of compensating further comprises the acts of determining the transmission capacity to process the data communication request within a predetermined interval of time, and establishing a parallel connection to increase transmission capacity. van Landegem taught to determine the transmission capacity with a predetermined interval of time and to establish a parallel connection to increase transmission capacity (col.12, lines 15-40, 52-63, col. 14, lines 54-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Pepe, Gauvin and van Landegem because van Landegem's teaching of determining transmission capacity and establishing parallel connection helps Pepe and Gauvin's method to determine bandwidth availability in a periodic basis in a connectionless environment (e.g., first protocol, col.2, lines 14-19)".

In response, Applicants respectfully contend that Landegem (col.12, lines 15-40, 52-63,

col. 14, lines 54-61) does not teach or suggest "determining the transmission capacity to process the data communication request **within a predetermined interval of time**". Applicants contend that the "predetermined interval of time" taught by Landegem to determine transmission capacity (i.e., bandwidth) is not the "predetermined interval of time" recited in claims 4 and 14. In fact, any given "predetermined interval of time" can be used to calculate the bandwidth, simply by dividing the given "predetermined interval of time" by the cell count (see Landegem, col. 12, lines 29-38). In contrast, the "predetermined interval of time" recited in claims 4 and 14 is being used to determine whether the transmission capacity is sufficient to process the data communication request of claims 4 and 12.

For example, assume that the data communication request is required to be processed in 2 seconds and that processing the data communication request requires transmitting 10,000 bytes of data. For this example, a transmission capacity of 5,000 bytes/sec is required to process the data communication request in a predetermined interval of time of 2 seconds. In order to determine whether the actual transmission capacity is sufficient for this purpose (as is required in claims 4 and 14), one must compare the actual transmission capacity with the required transmission capacity of 5,000 bytes/sec. Therefore, one must know the actual transmission capacity. Landegem teaches using a predetermined interval of time to calculate the actual transmission capacity. Thus, the predetermined interval of time (e.g., 10 seconds, 60 seconds, etc.) used to calculate the actual transmission capacity is unrelated to the "predetermined interval of time" of claims 4 and 14.

The point is that the "predetermined interval of time" taught by Landegem relates to calculating the actual transmission capacity, whereas the "predetermined interval of time" in claims 4 and 14 relates to determining whether the actual transmission capacity is sufficient for

satisfying the predetermined data transmission capacity requirement (i.e., 5000 bytes/sec in this example) for processing the data communication request of claims 4 and 14.

Accordingly, Applicants respectfully contend that the Examiner has failed to establish a *prima facie* case of obviousness in relation to claims 4 and 14.

Claims 9 and 19

The Examiner rejected claims 9 and 19 under 35 U.S.C. §103(a) as allegedly being unpatentable over Pepe and Gauvin, and further in view of O'Connell et al., US 6,661,787.

Since claims 9 and 19 respectively depend from claims 1 and 11, which Applicants have argued *supra* to not be unpatentable over Pepe in view of Gauvin under 35 U.S.C. §103(a), Applicants maintain that claims 9 and 19 are likewise not unpatentable over Pepe in view of Gauvin and further in view of O'Connell under 35 U.S.C. §103(a).

In addition, Pepe in view of Gauvin and further in view of O'Connell does not teach or suggest the feature: "receiving, by the client interceptor, an identification of the server application". The Examiner alleges that Gauvin teaches the preceding feature of claim 9 in col. 9, line 61 - col. 10, line 19, which is incorrect.

As a first argument, Applicants cite Gauvin, col. 10, lines 15-16 which states that "... port and server identifications, are provided in step 820". However, Gauvin, col. 10, lines 8-11 teaches only that the interceptor intercepts the execution flow of steps 810, 820-850 and routes the execution flow of steps 810, 820-850 to the communications manager 200. Thus, the communications manager 200, and not the interceptor 700, executes steps 810, 820-850.

As a second (alternative) argument, even if the interceptor 700 executes step 820 (which it doesn't), Applicants note that step 820 merely recites "providing" server identifications.

However, claims 4 and 14 require "receiving" a server identification. Applicants maintain that "providing" a server identification is the exact opposite of "receiving" a server identification. Therefore based on either the preceding first or second argument, Gauvin does not disclose the preceding feature of claims 4 and 14.

Additionally, Pepe in view of Gauvin and further in view of O'Connell does not teach or suggest the feature: "forwarding the identification to an address-resolution server for first-protocol address resolution". Although the Examiner has cited O'Connell, col. 2, lines 1-6 for disclosure of "a table known as an ARP (address resolution protocol) cache", Applicants maintain that O'Connell does not teach or suggest the address-resolution server of claims 9 and 19.

In addition, Applicants respectfully maintain that the Examiner's argument with respect to O'Connell is an improper modification of the secondary reference of Gauvin. The Examiner argues that the primary reference of Pepe discloses most of the features of claim 9. The Examiner also argues that the secondary reference of Gauvin has modified the primary reference of Pepe, by alleging that Gauvin teaches or suggests "receiving ... an **identification** of the server application" (emphasis added). The Examiner additionally argues that the secondary reference of O'Connell has modified the secondary reference of Gauvin, by alleging that O'Connell teaches or suggests "forwarding the **identification** to an address-resolution server ..." (emphasis added). Applicants maintain that it is improper to argue that a claim feature is taught or suggested by a secondary reference through modification of another secondary reference. If the Examiner could modify a secondary reference in the preceding manner, then the Examiner would be able to show the existence of any element or feature of any claim merely by chaining a sufficient number of secondary references together in the preceding manner. Accordingly,

Applicants respectfully maintain that the rejection of claims 9 and 19 under 35 U.S.C. §103(a) is improper and should be withdrawn.

CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account 09-0457.

Date: 05/31/2005

Jack P. Friedman
Jack P. Friedman
Registration No. 44,688

Schmeiser, Olsen & Watts
3 Lear Jet Lane, Suite 201
Latham, New York 12110
(518) 220-1850